

Appln. No. 10/790,959  
Response to Office Action mailed August 25, 2006

RECEIVED  
CENTRAL FAX CENTER

NOV 20 2006

R E M A R K S

Applicants are pleased to note that claims 1, 3 and 21 to 23 were deemed by the Examiner to be allowable (see "Allowable Subject Matter" in items 13 to 15 on pages 5 to 6 of the Office Action).

Applicants' present claim 1 is directed to a rolling element which is made from a steel, the steel comprising 0.5 to 1.5 wt% carbon and a total amount of 0.2 to 2.0 wt% of one or more alloy elements selected from the group consisting of V, Ti, Zr, Nb, Ta and Hf; wherein 0.4 to 4.0 % by volume of one or more compounds selected from the group consisting of carbides, nitrides and carbonitrides of said alloy elements having an average particle diameter of 0.2 to 5  $\mu\text{m}$  are dispersed, wherein the rolling element has a rolling contact surface layer, the rolling contact surface layer has a quench hardened layer which has been subjected to induction hardening, the quench hardened layer has a martensite parent phase and the martensite parent phase has a soluble carbon concentration of 0.3 to 0.8 wt%, and one or more of said carbides, nitrides and carbonitrides are dispersed in an

Appln. No. 10/790,959  
Response to Office Action mailed August 25, 2006

amount of 0.4 to 4.0% by volume within the martensite parent phase.

Claim 1 was rejected under 35 USC 103 as being unpatentable over JP 60-5854 for the reasons set forth in item nos. 3 to 6 on pages 2 to 3 of the Office Action.

Claim 1 was rejected under 35 USC 103 as being unpatentable over Mitamura et al. (USP 5,338,377) for the reasons indicated in item nos. 7 to 10 on pages 3 to 4 of the Office Action.

It was admitted in the Office Action that each of JP 60-5854 and Mitamura et al. USP 5,338,377 do not teach (i) 0.4 to 4.0% by volume of carbides, nitrides or carbonitrides, as recited in applicants' claim 1 and (ii) a soluble carbon concentration of 0.3 to 0.8 wt%, as recited in applicants' claim 1.

Regarding the feature in applicants' claim 1 that one or more carbides, nitrides or carbonitrides are dispersed in an amount of 0.4 to 4.0% by volume within the martensite parent phase, applicants' claims are distinct from the cited reference in view of the dispersion effect and the attacking probability afforded by such feature.

Appln. No. 10/790,959  
Response to Office Action mailed August 25, 2006

Regarding the feature in applicants' claim 1 of a soluble carbon concentration is 0.3 to 0.8 wt%, it should be noted that a high-hardness, high-toughness martensite parent phase is obtained by said range of carbon concentration.

Withdrawal of the obviousness rejections is therefore respectfully requested.

Claims 1, 4 to 12, 20 and 25 to 27 were rejected on the ground of obviousness-type double patenting as being unpatentable over claims 1 to 9 of USP 6,413,328 (Takayama et al.) for the reasons set forth under "Double Patenting" in item nos. 11 and 12 on pages 4 to 5 of the Office Action.

A TERMINAL DISCLAIMER is being filed concomitantly herewith to avoid the double patenting rejection. Also enclosed is a Form PTO-2038 in the amount of \$130 in payment of the required fee for submission of a TERMINAL DISCLAIMER.

Withdrawal of the double patenting rejection is therefore respectfully requested.

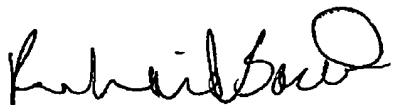
Reconsideration is requested. Allowance is solicited.

Appln. No. 10/790,959  
Response to Office Action mailed August 25, 2006

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,

Frishauf, Holtz, Goodman  
& Chick, P.C.  
220 Fifth Avenue, 16th Fl.  
New York, NY 10001-7708  
Tel. Nos. (212) 319-4900  
(212) 319-4551/Ext. 219  
Fax No.: (212) 319-5101  
E-Mail Address: BARTH@FHGC-LAW.COM  
RSB/ddf



Richard S. Barth  
Reg. No. 28,180

Encs.: TERMINAL DISCLAIMER and Form PTO-2038 in the  
amount of \$130